

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 08-145113

(43)Date of publication of application : 04.06.1996

(51)Int.Cl.

F16F 13/18
B60K 5/12

(21)Application number : 06-291453

(71)Applicant : TOKAI RUBBER IND LTD

(22)Date of filing : 25.11.1994

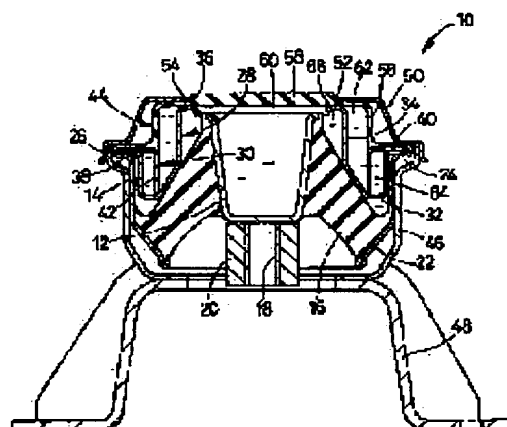
(72)Inventor : TANAHASHI HIROAKI

(54) FLUID ENCLOSED TYPE MOUNT

(57)Abstract:

PURPOSE: To provide a fluid enclosed type mount which permits accomplishing a liquid pressure absorbing mechanism incorporating a movable member while the structure remains simple.

CONSTITUTION: A resilient film of rubber 44 supported by the second mounting member 14 is partially restrained with respect to the second mounting member 14 and is partitioned into a plurality of compartments by the restraint part(s), and by these compartments a flexible film 56 to admit capacity change of an equilibrium chamber 62 and a movable member 58 to constitute a liquid pressure absorbing mechanism are formed.



LEGAL STATUS

[Date of request for examination] 17.12.1999

[Date of sending the examiner's decision of rejection] 24.12.2002

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] while connecting elastically the first attachment member and the second attachment member which were allotted by separating predetermined distance mutually with a support rubber-elasticity object in which it was infixed among them -- this -- the pressure-receiving room a part of wall is constituted with said support rubber-elasticity object by both sides whose batch members fixed to the second attachment member were pinched, and internal-pressure fluctuation is made to produce at the time of an oscillating input Fluid passage which opens these pressure-receiving room and a balanced room for free passage mutually while constituting a balanced room where a part of wall is constituted by flexible film, and capacity change is permitted based on deformation of this flexible film and enclosing incompressible fluid with these pressure-receiving room and a balanced room while being fluid filled system mounting equipped with the above and making a rubber elasticity film support by said second attachment member -- this rubber elasticity film -- this -- you make it restrain partially to the second attachment member, this rubber elasticity film is divided into two or more partition portions by this restricted section, and it is characterized by constituting said flexible film and said moving-part material by those partition portions, respectively.

[Claim 2] Fluid filled system mounting according to claim 1 from which said moving-part material is constituted by inside [section / this / annular / restricted] portion while a part for a center section of said rubber elasticity film is annularly restrained to said second attachment member and said flexible film is constituted from this annular restricted section by lateral part.

[Claim 3] Fluid filled system mounting according to claim 1 or 2 by which each partition portion in said rubber elasticity film which constitutes said flexible film and said moving-part material is exposed by each in lateral surface in outer space.

[Claim 4] Fluid filled system mounting given in claim 1 thru/or any of 3 they are. [in which said balanced room is formed as the surroundings of said pressure-receiving room are surrounded annularly]

[Claim 5] Fluid filled system mounting given in claim 1 thru/or any of 4 they are. [by which this rubber elasticity film is restrained to said second attachment member by putting said rubber elasticity film from both sides by said batch member and restricted member fixed to said second attachment member]

[Claim 6] Fluid filled system mounting according to claim 5 from which a wrap protective cover is constituted by said restricted member in said flexible film which consisted of said rubber elasticity films.

[Claim 7] Fluid filled system mounting given in claim 1 thru/or any of 6 while a passage formation member which forms said fluid passage in a periphery edge of said batch member is arranged and being fixed to said second attachment member, they are. [by which vulcanization adhesion of the periphery edge of said rubber elasticity film is carried out to this passage formation member]

[Claim 8] Fluid filled system mounting given in claim 1 thru/or any of 7 they are. [which is made more nearly heavy-gage / the partition portion which constitutes said moving-part material / than a partition portion which constitutes said flexible film in said rubber elasticity film]

[Translation done.]

*** NOTICES ***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to fluid filled system mounting which is used suitable for the engine mount of an automobile etc. and which acquired the vibrationproofing effect based on the fluid operation of the fluid enclosed with the interior.

[0002]

[Background of the Invention] As it is infixed from the former between the members which constitute an oscillating transfer system and is indicated by JP,57-9340,A etc. as a kind of the mounting equipment which carries out vibrationproofing connection of both [these] the members While connecting elastically the first attachment member and the second attachment member which were allotted by separating predetermined distance mutually with the support rubber elasticity object in which it was infixed among them The pressure-receiving room a part of wall is constituted with said support rubber elasticity object by the both sides whose batch members fixed to the second attachment member were pinched, and internal pressure fluctuation is made to produce at the time of an oscillating input, While constituting the balanced room where a part of wall is constituted by the flexible film, and capacity change is permitted based on deformation of this flexible film and enclosing incompressible fluid with these pressure-receiving room and a balanced room It considers as the structure of coming to prepare the fluid passage which opens these pressure-receiving room and a balanced room for free passage mutually, and fluid filled system mounting which acquired the vibrationproofing effect based on the fluid operation of a resonance operation of a fluid, flow resistance, etc. made to flow through fluid passage at the time of an oscillating input is known.

[0003] Moreover, it sets to writing **** fluid filled system mounting. It aims at vibrationproofing to high frequency oscillation to the extent that the vibrationproofing effect based on a fluid operation of the fluid made to flow through fluid passage is not effectively demonstrated as indicated by said official report. Specified quantity deformation or displacement is enabled based on internal pressure fluctuation of a pressure-receiving room, it is based on the deformation or displacement, and the moving-part material which absorbs internal pressure fluctuation of the pressure-receiving room at the time of the input of small-size width-of-face vibration is adopted suitably.

[0004] However, in the former, if it was going to adopt the fluid pressure absorber style by moving-part material, since it was necessary to form moving-part material alone specially and to attach to mounting, mounting structure was complicated and it was not avoided that manufacture nature and cost nature get worse.

[0005]

[Problem(s) to be Solved] The place which succeeds in this invention against the background of the situation like ****, and is made into the solution technical problem in here It is in offering fluid filled system mounting of the improved structure which can make the fluid pressure absorber style by moving-part material realize easily according to easy structure in addition to the fluid passage which is made to permit the fluid flow between a pressure-receiving room and a balanced room, and demonstrates the vibrationproofing effect based on a fluid resonance

operation etc.

[0006]

[Means for Solution] In order to solve this technical problem, and a place by which it is characterized [of this invention] While connecting elastically the first attachment member and the second attachment member which were allotted by separating predetermined distance mutually with a support rubber elasticity object in which it was infixed among them this — with a pressure-receiving room a part of wall is constituted with said support rubber elasticity object by both sides whose batch members fixed to the second attachment member were pinched, and internal pressure fluctuation is made to produce at the time of an oscillating input While constituting a balanced room where a part of wall is constituted by flexible film, and capacity change is permitted based on deformation of this flexible film and enclosing incompressible fluid with these pressure-receiving room and a balanced room In fluid filled system mounting to which it makes it come based on internal pressure fluctuation of this pressure-receiving room to arrange in a wall of said pressure-receiving room moving-part material in which specified quantity deformation or displacement is possible while preparing fluid passage which opens these pressure-receiving room and a balanced room for free passage mutually You make it restrain partially to the second attachment member, and this rubber elasticity film is divided into two or more partition portions by this restricted section. while making a rubber elasticity film support by said second attachment member — this rubber elasticity film — this — by those partition portions It is in having constituted said flexible film and said moving-part material, respectively.

[0007] Moreover, in the first desirable mode of this invention, while a part for a center section of said rubber elasticity film is annularly restrained to said second attachment member and said flexible film is constituted from this annular restricted section by lateral part, said moving-part material is constituted by inside [section / this / annular / restricted] portion.

[0008] Furthermore, in the second desirable mode of this invention, each partition portion in said rubber elasticity film which constitutes said flexible film and said moving-part material is exposed by each in lateral surface in outer space again.

[0009] Furthermore, in the third desirable mode of this invention, as the surroundings of said pressure-receiving room are surrounded annularly, said balanced room is formed.

[0010] Moreover, in the fourth desirable mode of this invention, this rubber elasticity film is restrained to said second attachment member by putting said rubber elasticity film from both sides by said batch member and restricted member fixed to said second attachment member.

[0011] Furthermore, in the fifth desirable mode of this invention, a wrap protective cover is constituted again in said flexible film constituted from said rubber elasticity film by said restricted member.

[0012] Moreover, in the sixth desirable mode of this invention, while a passage formation member which forms said fluid passage in a periphery edge of said batch member is arranged and being fixed to said second attachment member, vulcanization adhesion of the periphery edge of said rubber elasticity film is carried out to this passage formation member.

[0013] Furthermore, it is supposed that the partition portion which constitutes said moving-part material is more nearly heavy-gage than a partition portion which constitutes said flexible film in said rubber elasticity film in the seventh desirable mode of this invention again.

[0014]

[Function and Effect] In fluid filled system mounting made into the structure of following this invention Substantially a single rubber elasticity film by having divided into two or more partition portions in the restricted section Without having made the rubber elasticity film of this single constitute both a flexible film and moving-part material, and being accompanied by the increment in special components mark by it, it will have simple structure and the fluid pressure absorber style by moving-part material may be realized.

[0015] Moreover, in the desirable first thru/or the fourth desirable mode of this invention, a flexible film and moving-part material may be constituted by each much more advantageous with a single rubber elasticity film.

[0016] Furthermore, protection of a flexible film and improvement in endurance may be realized, without being accompanied by the increment in a special member from a wrap protective cover

being constituted by the restricted member in a flexible film in the fifth desirable mode of this invention again.

[0017] Furthermore, in the sixth desirable mode of this invention, since attachment of a passage formation member may succeed in formation of fluid passage, and assembly of a rubber elasticity film at coincidence, simplification of structure and improvement in manufacture nature may be achieved.

[0018] Moreover, in the seventh desirable mode of this invention, since it is not necessary to become possible to perform displacement regulation of moving-part material, and to establish a special displacement regulation means according to the elastic force of the rubber elasticity film itself which constitutes moving-part material, much more simplification of structure is attained.

[0019]

[Example] Hereafter, in order to clarify this invention still more concretely, the example of this invention is explained to details, referring to a drawing.

[0020] First, the engine mount 10 for automobiles as one example of this invention is shown in drawing 1. The first fixing metal 12 arranged by separating predetermined distance mutually and the second fixing metal 14 are made into the structure connected with the support rubber elasticity object 16, and by attaching the first fixing metal 12 in a power-unit side, and attaching the second fixing metal 14 in a body side, respectively, this engine mount 10 hangs a power unit to the body, and it carries out the elastic suspension in the condition. In addition, when power-unit weight is done and the support rubber elasticity object 16 carries out a compression set under such a wearing condition While the first fixing metal 12 is made to displace only the specified quantity to the second fixing metal 14 by the vertical lower part (the inside of drawing, lower part), a main vibration which should be carried out vibrationproofing will be inputted in the direction of a vertical (the vertical direction in drawing 1) to between the first fixing metal 12 and the second fixing metal 14.

[0021] It has more the abbreviation cup configuration equipped with the circumferential wall of the shape of a cylinder which extends the first fixing metal 12 slightly toward the direction of a opening in details, and the attachment block 20 which has the mounting-stud hole 18 has fixed to the bottom wall section of this first fixing metal 12.

[0022] On the other hand, the second fixing metal 14 has the shape of a cylindrical shape of a major diameter, and you separate predetermined distance to the method of the outside of the direction of a path of the first fixing metal 12, it is made to be located on an abbreviation same axial center, and the opening side point of the first fixing metal 12 and the protrusion point of the attachment block 20 are arranged in the condition that only the specified quantity projects, respectively, from the shaft-orientations both sides of this second fixing metal 14. In addition, the second fixing metal 14 has the caulking section 26 prepared in the opening edge of shaft-orientations another side (inside of drawing, upper part) at the periphery edge of the level difference section 24 and this level difference section 24 which spreads in the method of the outside of the direction of a path while shaft-orientations one (the inside of drawing, lower part) edge is used as the taper cylinder part 22 minor-diameter-ized gradually as it goes to the method of the outside of shaft orientations.

[0023] And the support rubber elasticity object 16 is infixed between the peripheral face of the first fixing metal 12, and the inner skin of the taper cylinder part 22 in the second fixing metal 14, and it really by which vulcanization adhesion of the support rubber elasticity object 16 was carried out to these first fixing metal 12 and the second fixing metal 14 considers as vulcanization mold goods. opening by the side of the taper cylinder part [in / this support rubber elasticity object 16 has the shape of a heavy-gage abbreviation taper cartridge which inclines toward the first fixing metal 12 and is prolonged from the taper cylinder part 22 of the second fixing metal 14, and / by this support rubber elasticity object 16 / the second fixing metal 14] 22 — a fluid — it is blockaded densely.

[0024] Moreover, the batch metallic ornaments 28 as a batch member and the orifice metallic ornaments 30 as a passage formation member are arranged by opening by the side of the level difference section 24 in the second fixing metal 14. While the batch metallic ornaments 28 are used as the cylindrical projected part 34 which it has the annular crevice 32 which carries out a

opening to shaft-orientations one side, and the inner circle wall portion of this annular crevice 32 is extended by shaft orientations, and projects in predetermined height While the protrusion point of this cylindrical projected part 34 curves to the method of the inside of the direction of a path and the annular presser-foot section 36 is really formed, the peripheral-wall portion of the annular crevice 32 is crooked toward the method of the outside of the direction of a path, and the flange 38 is formed. Moreover, on the other hand, while the orifice metallic ornaments 30 consist of the circular ring tabular attachment section 40 and a body 42 projected and formed toward shaft-orientations one side from the inner circumference edge of this attachment section 40 the opening periphery section of the rubber elasticity film 44 which has the shape of a closed-end disk type of ***** carries out vulcanization adhesion at the attachment section 40 — having — **** — this rubber elasticity film 44 — the main hole of the orifice metallic ornaments 30 — a fluid — it is made to blockade densely

[0025] And while being attached in the condition that the flange 38 of the batch metallic ornaments 28 piles up on the level difference section 24 of the second fixing metal 14, and the annular crevice 32 enters in the second fixing metal 14 The attachment section 40 of the orifice metallic ornaments 30 piles up on the flange 38 of the batch metallic ornaments 28. The body 42 is attached in the condition of entering in the annular crevice 32 of the batch metallic ornaments 28. When [second] the flange 38 of these batch metallic ornaments 28 and the attachment section 40 of the orifice metallic ornaments 30 make it go away fixing-metal 14 and caulking immobilization is carried out by the section 26 on the level difference section 24, the batch metallic ornaments 28 and the orifice metallic ornaments 30 are being fixed to the second fixing metal 14.

[0026] moreover, opening by the side of the level difference section [in / by this / the second fixing metal 14] 24 — the rubber elasticity film 44 — a fluid — it is blockaded densely, with while the interior of the second fixing metal 14 is sealed to outer space with the support rubber elasticity object 16 and the rubber elasticity film 44 which were arranged in the shaft-orientations both ends of this second fixing metal 14, predetermined incompressible fluid is enclosed there. In addition, as this enclosure fluid, by this example, the low viscous fluid below 0.1Pa and s, such as water, alkylene glycol, a polyalkylene glycol, and silicon oil, is suitably adopted so that the vibrationproofing effect based on a resonance operation of a fluid etc. may be demonstrated effectively. Moreover, it may succeed in enclosure of a fluid advantageously by performing in a fluid assembly of the batch metallic ornaments 28 to the one vulcanization mold goods of the support rubber elasticity object 16 which has the first and the second fixing metal 12 and 14, and the orifice metallic ornaments 30 etc.

[0027] Furthermore, while outside attachment immobilization of the covering metallic ornaments 46 which have the shape of a cylindrical shape is carried out at the second fixing metal 14 and the mounting bracket 48 has fixed to shaft-orientations one (the inside of drawing, lower part) edge of these covering metallic ornaments 46, attachment immobilization of the restricted metallic ornaments 50 is carried out to the edge of shaft-orientations another side (inside of drawing, upper part) of these covering metallic ornaments 46. From the attachment section to the covering metallic ornaments 46, these restricted metallic ornaments 50 can be projected to tubed toward the method of the outside of shaft orientations, are closed, separated predetermined distance and have covered the external surface of the periphery portion of the rubber elasticity film 44. Moreover, the protrusion point of these restricted metallic ornaments 50 is crooked in the shape of an inner flange toward the method of the inside of the direction of a path, among those the periphery section 52 sandwiches the rubber elasticity film 44. By carrying out an opposite location to the presser-foot section 36 of the batch metallic ornaments 28 The direction interstitial segment of a path of this rubber elasticity film 44 is compressed by the inner circumference edge 52 of these restricted metallic ornaments 50, and the presser-foot section 36 of the batch metallic ornaments 28, and carries out restricted support fixed to the second fixing metal 14. The rubber elasticity film 44 rather than the annular restrained section 54 by the restricted metallic ornaments 50 and the batch metallic ornaments 28 furthermore, the amount of periphery flank While considering as easy flexible **** 56 of elastic deformation, deformation is made into movable **** 58 as moving-part material restricted according to

elastic force by restricted support being carried out in the state of spreading rather than this restrained section 54, a part for an inner circumference flank being used as more nearly heavy-gage than flexible **** 56.

[0028] The fluid room formed in the interior of the second fixing metal 14 is bisected by this by the both sides which sandwiched the batch metallic ornaments 28. With, the pressure-receiving room 60 a part of wall is constituted with the support rubber elasticity object 16, and internal pressure fluctuation is made to produce based on the elastic deformation of this support rubber elasticity object 16 at the time of an oscillating input. A part of wall is constituted by flexible **** 56, and the balanced room 62 where capacity change is easily permitted based on deformation of this flexible **** 56 is formed. Moreover, between the batch metallic ornaments 28 and the orifice metallic ornaments 30, the annular passage which extends in a hoop direction along with the inner skin of the second fixing metal 14 is formed, and when this annular passage is opened for free passage by the pressure-receiving room 60 and the balanced room 62 in the suitable location on a periphery, the orifice path 64 as fluid passage which opens these pressure-receiving room 60 and the balanced room 62 for free passage mutually, and permits fluid flow is formed.

[0029] while the first fixing metal 12 is fixed to the power-unit side which is not a drawing example through the attachment block 20, by fixing the second fixing metal 14 to the body side which is not a drawing example through a mounting bracket 48, the engine mount 10 made into such structure will be infixed between these power units and the body, will hang this power unit to the body, and it will carry out [engine mount] the elastic suspension in the condition. In addition, although the first fixing metal 12 is carrying out the contiguity location in drawing 1 at movable **** 58 while the batch metallic ornaments 28 are carrying out the contiguity location at the support rubber elasticity object 16 As [contact / when the weight of a power unit is done, the support rubber elasticity object 16 carries out elastic deformation and the first fixing metal 12 is made to displace to the second fixing metal 14 by the vertical lower part (the inside of drawing, lower part) / under the wearing condition to vehicles, / these each part material]

[0030] It **, and under such a wearing condition, when vibration of the direction of a vertical (the inside of drawing, the vertical direction) is inputted between the first fixing metal 12 and the second fixing metal 14, the support rubber elasticity object 16 will carry out elastic deformation, and internal pressure fluctuation will be caused in the pressure-receiving room 60. and at the time of the input of about 5-15Hz subsonic vibration, such as a shake The high damping effect based on a resonance operation of the fluid made to flow through the orifice path 64 between the pressure-receiving room 60 and the balanced room 62 may be demonstrated effectively. The outstanding vibration-deadening effect is demonstrated, and at the time of the input of about 100-200Hz high frequency oscillation, such as ****, although ***** will also be in a state of obstruction substantially, the orifice path 64 The good vibrationproofing effect may be demonstrated by absorbing internal pressure fluctuation of the pressure-receiving room 60, and demonstrating the low dynamic spring effect based on deformation of movable **** 58 which constitutes a part of wall of the pressure-receiving room 60. As [bar / in addition, / since deformation is restricted by the elastic force of itself, movable **** 58 originates in the fluid pressure absorption function by this movable **** 58, and / the damping effect over the subsonic vibration by the orifice path 64]

[0031] And in there, it sets to the engine mount 10 made into the structure like ****. Movable **** 58 which constitutes the fluid pressure absorber style of the pressure-receiving room 60 with the rubber elasticity film 44 Another member special [since it is formed in one with flexible **** 56 of the balanced room 62] in order to give this fluid pressure absorber style is not needed. According to small components mark and easy structure The fluid pressure absorber style which demonstrates the effective vibrationproofing effect to high frequency oscillation may be given.

[0032] And the restricted section which restrains the rubber elasticity film 44 partially and is divided to flexible **** 56 and movable **** 58 in this example From being constituted by putting the rubber elasticity film 44 by the batch metallic ornaments 28 and the restricted metallic ornaments 50 There is also an advantage that covering which protects flexible **** 56

is given without using a special member, while the restricted section may be realized and simplification of mounting structure may be attained much more advantageous according to small components mark and easy structure, without needing vulcanization adhesion etc.

[0033] Moreover, in this example, since deformation is restricted by the elastic force of itself, movable **** 58 being used as heavy-gage, the specification-part material for restricting the deformation of this movable **** 58 is also unnecessary, and simplification of much more structure may be attained.

[0034] Furthermore, since vulcanization adhesion is carried out and the rubber elasticity film 44 is attached in the orifice metallic ornaments 30 in this example again, while the assembly to the second fixing-metal 14 grade is easy, there is an advantage that fluid **** which was excellent in the fluid room is stabilized, and is demonstrated.

[0035] Moreover, in this example, even if you make it go away caulking section 26 and it does not perform rust-proofing paint after processing from the second making it go away fixing-metal 14, and the section 26 being covered by the covering metallic ornaments 46 and the restricted metallic ornaments 50, there is also an advantage that the rust-proofing nature of this caulking section 26 may fully be secured.

[0036] In addition, it sets to the engine mount 10 of this example. While one pressure-receiving room 60 side is minor-diameter-ized by the batch metallic ornaments 28 By arranging the first fixing metal 12, as it enters into this minor-diameter-ized portion When the annular constriction passage 66 is formed between the opening side point peripheral face of the first fixing metal 12, and the inner skin of the batch metallic ornaments 28 and the first fixing metal 12 and second fixing metal 14 carry out a relative displacement at the time of an oscillating input From the fluid flow which leads being made to arise, this constriction passage 66 Tune up the magnitude of this constriction passage 66 suitably, and it is based on a resonance operation of the fluid made to flow through this constriction passage 66. It is also possible the effect of the fluid pressure absorber style by movable **** 58 and to acquire the low dynamic spring effect over high frequency oscillation 300Hz or more to the extent that it is not demonstrated effectively, and high-speed ** and the vibrationproofing effect over **** etc. can be effectively acquired by it.

[0037] And by having minor-diameter-ized a part of pressure-receiving room 60 in this way, and having formed the constriction passage 66 between the first fixing metal 12 When vibration of the direction (horizontal) which intersects perpendicularly in the main oscillating input direction between the first fixing metal 12 and the second fixing metal 14 is inputted The fluid flow rate made to flow the inside of the constriction passage 66 based on the relative displacement of the first fixing metal 12 and the second fixing metal 14 by the hoop direction is stopped. By it Aggravation of the damping characteristic resulting from fluid style actuation of the hoop direction in this constriction passage 66 may also be mitigated or prevented effectively.

[0038] As mentioned above, although the example of this invention has been explained in full detail, this is literal instantiation, and this invention is limited only to this example and interpreted.

[0039] For example, in said example, although movable **** 58 was carried out at a part for the center section of the rubber elasticity film 44 and partition formation of flexible **** 56 was carried out at the periphery portion, respectively, the partition gestalt of movable **** and flexible **** in the rubber elasticity film 44 is not limited at all, and may be suitably set up in consideration of the gestalt of a pressure-receiving room or a balanced room etc.

[0040] Moreover, although vulcanization adhesion was carried out and the rubber elasticity film 44 was attached to the orifice metallic ornaments 30 in said example, it is also possible to attach the periphery edge of the rubber elasticity film 44 by carrying out caulking immobilization directly or fixing to a batch member to the second fixing metal 14.

[0041] Furthermore, the structure or the gestalt of fluid passage are not restrictively interpreted by the orifice path 64 in said example, and may be suitably changed again according to the damping characteristic demanded.

[0042] Furthermore, it is also possible to constitute a regulation means to restrict the deformation of movable **** 58 by fixing sail cloth etc. to movable **** 58, or extending the presser-foot section 36 of the batch metallic ornaments 28 and the inner circumference edge 52

of the restricted metallic ornaments 50 to the method of the inside of the direction of a path etc., and when establishing such a deformation regulation means, it is not necessary to make movable **** 58 more nearly heavy-gage than flexible **** 56.

[0043] Moreover, although outside attachment immobilization of the restricted metallic ornaments 50 was carried out in said example at the covering metallic ornaments 46, these restricted metallic ornaments 50 are laid on top of the batch metallic ornaments 28 and the orifice metallic ornaments 30, and the second thing which you make it go away fixing-metal 14, and is directly done for caulking immobilization by the section 26 is also possible as shown, for example in drawing 2 . Moreover, in the engine mount 68 shown in drawing 2 , to the rubber elasticity film 44, the annular stop section 70 prolonged in a hoop direction is formed, a location gap of the rubber elasticity film 44 can be prevented, and movable **** 58 can hold now the restricted portion by the batch metallic ornaments 28 and the restricted metallic ornaments 50 in favor of a spreading condition. In addition, in drawing 2 , in order to make an understanding easy, the same sign as the first example is attached all over drawing to the member and part which were made into the same structure as the first example, respectively.

[0044] In addition, this invention is applicable [in said example, although this invention was applied to the engine mount of the type which hangs a power unit to the body and is made to support in the condition, one example was shown, but] similarly to the engine mount of a type which makes a power unit support in the state of **** to the body as indicated by said JP,57-9340,A. In addition, it is able for the second to make it go away fixing-metal 14, and to carry out caulking immobilization, and to attach the bracket of the shape of a closed-end cylindrical shape for attaching the second fixing metal 14 in a body side in the section 26, the opening of the covering metallic ornaments 46, etc. in a opening portion, and to constitute the restricted metallic ornaments 50 with this bracket in that case.

[0045] Moreover, this invention of all being similarly applied to various kinds of vibrationproofing mountings of those other than the engine mount for automobiles is natural.

[0046] In addition, although listing is not carried out one by one, unless this invention may be carried out in the mode which added modification which becomes various, correction, amelioration, etc. based on this contractor's knowledge and such an embodiment deviates from the meaning of this invention, it cannot be overemphasized that it is that by which all are contained within the limits of this invention.

[Translation done.]

*** NOTICES ***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the drawing of longitudinal section showing the engine mount as one example of this invention.

[Drawing 2] It is the drawing of longitudinal section showing the engine mount as another example of this invention.

[Description of Notations]

- 10 68 Engine mount
- 12 First Fixing Metal
- 14 Second Fixing Metal
- 16 Support Rubber Elasticity Object
- 28 Batch Metallic Ornaments
- 30 Orifice Metallic Ornaments
- 44 Rubber Elasticity Film
- 50 Restricted Metallic Ornaments
- 54 Restrained Section
- 56 Flexible ****
- 58 Movable ****
- 60 Pressure-receiving Room
- 62 Balanced Room
- 64 Orifice Path

[Translation done.]